

Stipica Mudražija, Šime Smolić and Ivan Čipin

26 Living alone in Europe and health behaviours

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- ▶ Living alone in old age is an indicator of higher risk of adverse health behaviour
 - ▶ Older adults living alone smoke more and eat less healthy food than those living with others, but they are also less likely to drink excessively
 - ▶ Living arrangements and related health behaviours vary substantially across countries
 - ▶ Thus, although policy should promote a healthy lifestyle among older adults living alone, a one-size-fits-all approach is suboptimal
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26.1 Introduction

Living alone is an integral part of the population ageing process. Single-person households are particularly widespread in older ages in many developed countries. In fact, such households are often considered the most visible sign of societal ageing (Reher and Requena, 2018). This phenomenon stems from the second demographic transition (Van De Kaa, 1987) that altered population trends in the latter half of the twentieth century. Single living in later life may result from preferences or circumstances, including available resources, health status, kin or partner availability and social and family support. Although some older adults choose to live alone and keep their personal autonomy – and are well prepared to do so – others are substantially more vulnerable than older persons who live with someone.

A particular challenge in this area of interest is the link between living alone and health behaviours. Some research evidence, such as the UK study by Kharicha and colleagues (2007), suggests that those who live alone tend to smoke more and consume less fibre-rich foods such as fruits and vegetables. These and other adverse health behaviours are linked to negative health outcomes (Segovia et al., 1989; Abuladze et al., 2017) which, in turn, adversely affect the fiscal sustainability of healthcare systems.

However, variations exist in the association between solo living and health behaviour. Such differences stem from the diversity of experiences that shape the living arrangements of older adults. Public policies that affect personal circumstances and preferences add a further layer of complexity to the relationship.

This chapter explores how living alone is associated with health behaviours across countries, taking into account key demographic and socioeconomic characteristics that distinguish those living alone from those who reside with others. We explore how living alone is associated with four key indicators of health behaviour (smoking, drinking, physical inactivity and unhealthy diet) among people aged 60 and older in Europe and Israel. In addition, we consider possible age differences and, in particular, whether living alone in advanced old age has greater adverse effects on health behaviours than among the younger old. Finally, we examine whether and how different national contexts shape the relationships between living alone and health-related behaviour.

26.2 Study methodology

We used individual-level data from SHARE Waves 4–6 to explore the health behaviours of older adults. The *outcome variables* were a set of health risk behaviours from the behavioural risks (BR) module. They included smoking (respondents who reported smoking at the time of the interview), excessive drinking (7 and 14 or more alcoholic drinks during the last 7 days for women and men, respectively), physical inactivity (never engaged in vigorous or moderate physical activity) and unhealthy diet (whether consumed fruits and vegetables less frequently than daily). The *key independent variable* was a dichotomous measure that indicated whether the respondent was living alone or with others. To explore the predictors of health behaviours, we analysed their prevalence by country and then employed a logistic regression analysis of the predictors of health behaviours, controlling for a collection of potentially *confounding variables*. These variables were as follows: gender, age (60–69, 70–79 and 80 years and older), years of education, number of living children (including natural, foster, adopted or stepchildren), child distance (if any child lives within 30 minutes), urban or rural area, depression (score of 4 or more on the EURO-D depression scale), total equivalized household income (classified into quintiles by individual country) and welfare regime (continental (AT, DE, FR, CH, BE, LU), social democratic (SE, DK), Mediterranean (ES, IT, GR, PT), eastern European (CZ, PL, SI, EE, HR) and mixed (IL)).

26.3 Study results

We first compared differences in health-related lifestyle factors by living arrangements and country to explore whether respondents aged 60 and older

who live alone were more likely to engage in risky health behaviours. In general, not accounting for any compositional differences between the two groups, older adults living alone appear to smoke more than those living with others, are less physically active and eat less healthy but are less likely to drink excessively.

The lowest proportion of respondents aged 60 and older who reported smoking at the time of the interview were from Portugal and France (10%), and the highest was from Poland (22%), followed by the Czech Republic (19%) and Greece (18%). Older adults living alone in Austria, Germany, Denmark, Sweden and Slovenia had statistically higher chances of smoking ($p < 0.05$) than those living with others, with differences ranging from 2.6 percentage points in Slovenia to 8.7 percentage points in Denmark (Figure 26.1).

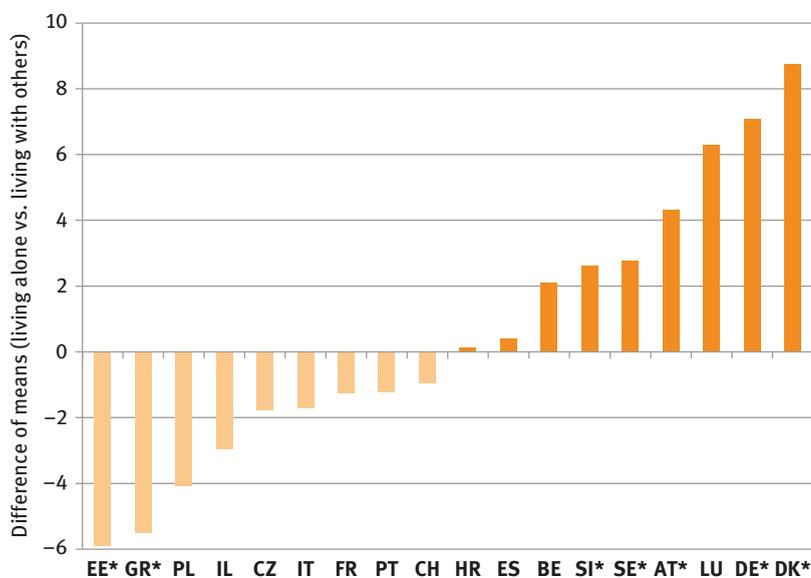


Figure 26.1: Difference in smoking, living alone vs. living with others by country.

Note: * $p < 5\%$.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

The proportion of older adults who drank excessively ranged from less than 1 per cent in Israel to approximately 25 per cent in Belgium, France and Portugal, and approximately 30 per cent in Denmark. Respondents who lived alone were significantly less likely to experience excessive drinking in Belgium, Germany, France, Denmark, Sweden, Greece, Italy, Portugal, Czech Republic and Slovenia ($p < 0.05$), with differences ranging from 2.2 percentage points in Sweden to 15.6 percentage points in Portugal (Figure 26.2).

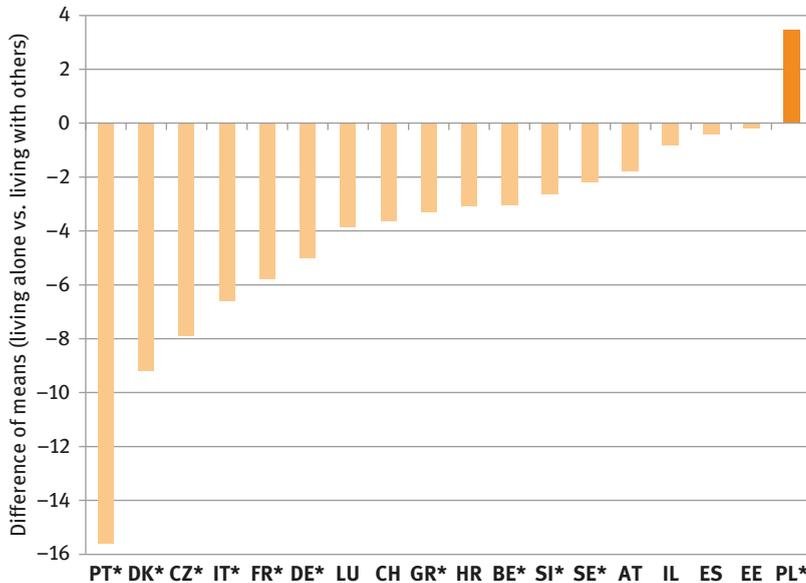


Figure 26.2: Difference in excessive drinking, living alone vs. living with others by country.

Note: * $p < 5\%$.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

About one-quarter of older adults in Italy, Israel, Portugal and Poland were physically inactive relative to only one in seventeen older adults in Sweden and Switzerland. In addition, the prevalence of physical inactivity was significantly higher for respondents who lived alone than for others in all countries except Israel. The differences ranged from 5.2 percentage points in Switzerland to 12 percentage points in Poland (Figure 26.3).

Finally, about one in ten French and Belgian respondents aged 60+ exhibited unhealthy eating habits relative to approximately 30 percent of respondents in the Czech Republic, Estonia, Greece and Israel, and almost one-half in Poland. Respondents who lived alone in Austria, Belgium, Denmark, Italy, Croatia and Estonia were significantly more likely to practice unhealthy eating relative to their peers who lived with others (Figure 26.4).

We estimated logistic regression models for the outcome variables. In Model A, we estimated each health behaviour by living arrangement (living alone). In Model B, we added the control variables and in Model C we included interactions of age and welfare regime with the variable 'living alone'. Figure 26.5 highlights the results for the main predictor of interest – living alone. Model C (the grey bar) shows that older adults living alone had a 1.2 times greater

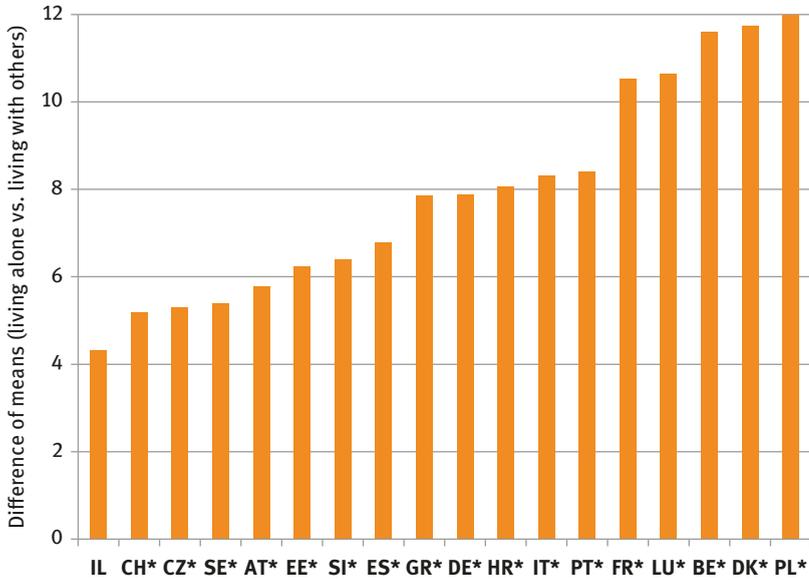


Figure 26.3: Difference in physical inactivity, living alone vs. living with others by country.

Note: * $p < 5\%$.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

probability of reporting that they smoked at the time of the interview and a 1.3 times greater likelihood of eating unhealthy food every day. No significant difference existed in physical activity by living arrangements after the controls and interactions were considered. Conversely, those who lived alone were approximately 25 per cent less likely to report excessive drinking.

Regarding the other predictors included in the model, age was negatively associated with smoking, excessive drinking and eating unhealthy foods, and positively related to physical inactivity. However, the results of the interaction of age and living alone suggest that no difference exists in the age–health behaviours relationship by living arrangements (results not shown).

The predictive margins of probability of various health behaviours by living arrangement type across different welfare regimes (Figures 26.6–26.9) showed a complex pattern of relationships of welfare regime types and outcomes of interest. Living alone in continental and social democratic regimes was associated with a stronger adverse relationship with smoking than in the Mediterranean and eastern European regimes, whereas no adverse relationship was observed in the mixed regime. Similarly, whereas living alone was associated with a higher probability of physical inactivity in the continental and social democratic welfare

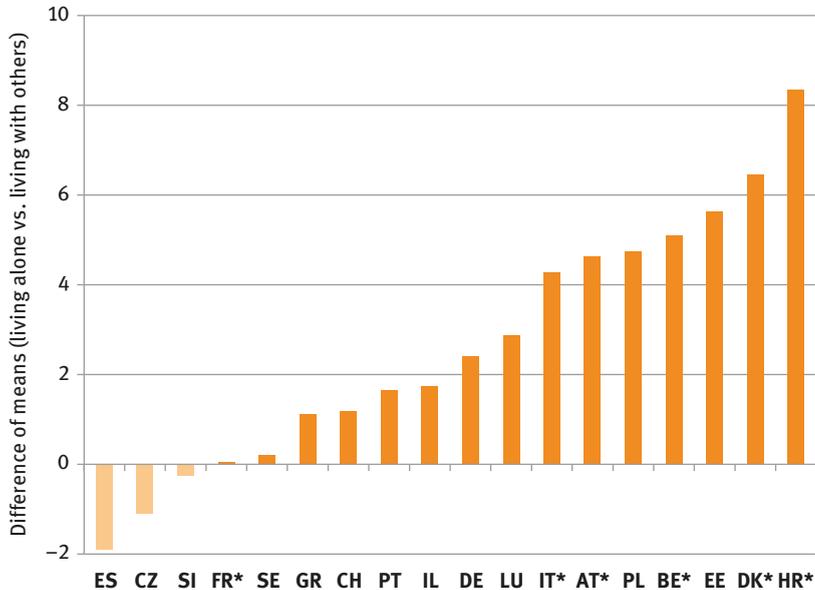


Figure 26.4: Difference in unhealthy diet, living alone vs. living with others by country.

Note: * $p < 5\%$.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

regimes, either no or a negative relationship existed across other welfare regimes. Conversely, although the probability of having an unhealthy diet varied across welfare regimes, the relative difference in living arrangements appeared approximately constant. Finally, the probability of drinking exhibited the clearest welfare regime gradient, from the highest in the continental to the lowest in the mixed welfare regime, with the negative impact of living alone relative to living with others particularly pronounced in the Mediterranean regime.

26.4 Discussion and conclusion

The analysis tentatively confirms the previous finding from the literature that living alone in old age is associated with more adverse health behaviours than living with others. However, the analysis also highlights some differences between countries, suggesting that national contexts potentially play an important role. Bivariate analysis showed that persons aged 60 or older and living alone were, in general, less likely to drink excessively than their peers who

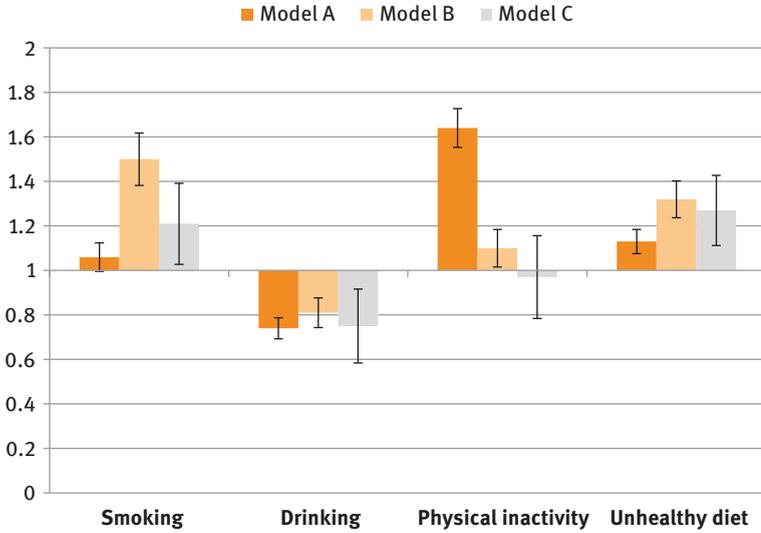


Figure 26.5: Odd ratios for the variable of main interest ‘living alone’.
Notes: *Model A* included only the predictor variable ‘living alone’; *Model B* controlled for the rest of the independent variables; *Model C* included controls and interactions.
Source: SHARE Wave 4, 5, 6 release 6.1.1.

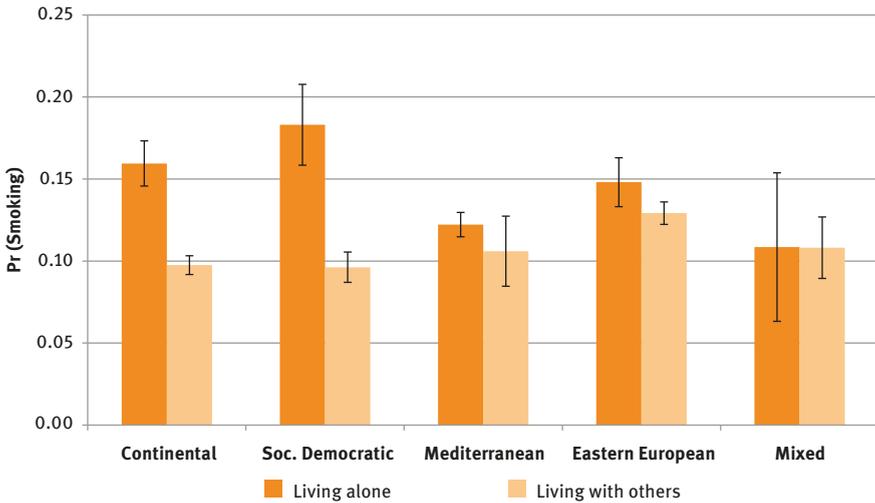


Figure 26.6: Predictive margins of probability of smoking by living arrangement and welfare regime.
Source: SHARE Wave 4, 5, 6 release 6.1.1.

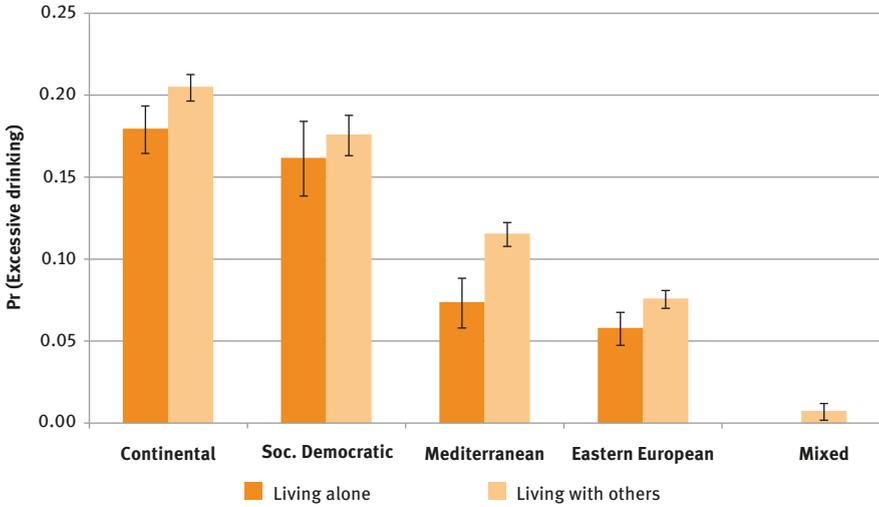


Figure 26.7: Predictive margins of probability of drinking excessively by living arrangement and welfare regime.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

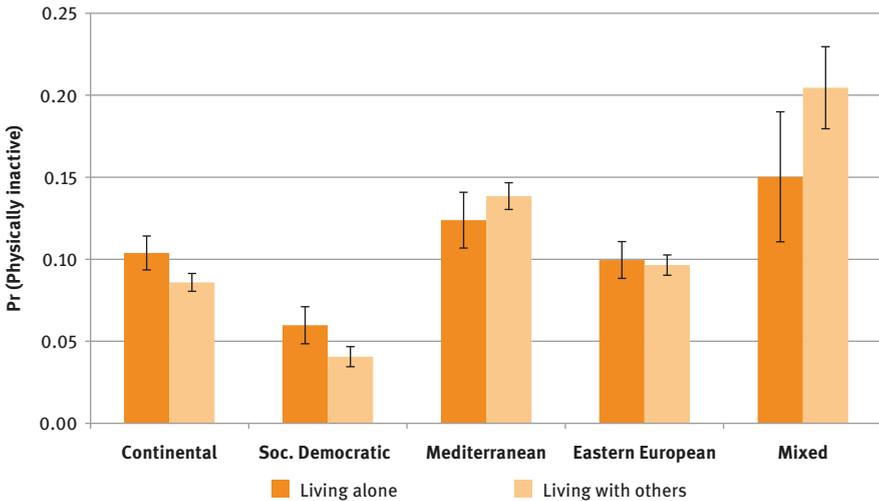


Figure 26.8: Predictive margins of probability of being physically inactive by living arrangement and welfare regime.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

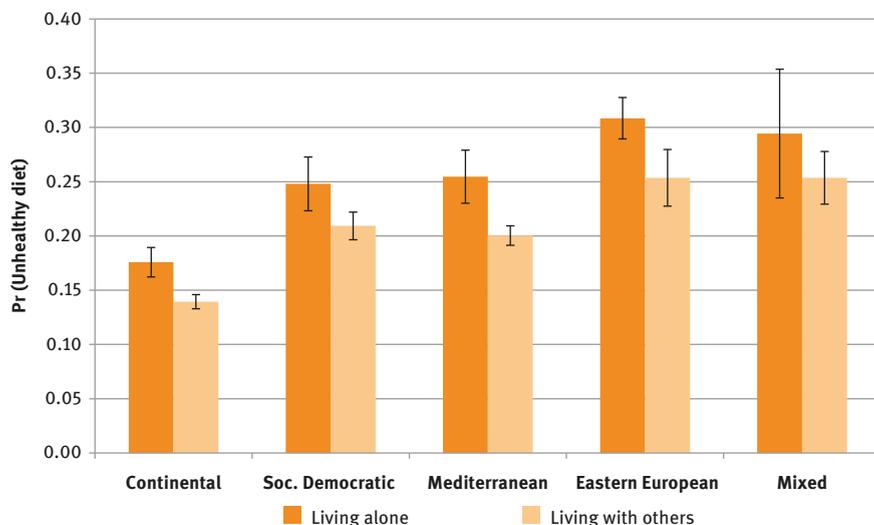


Figure 26.9: Predictive margins of probability of having an unhealthy diet by living arrangement and welfare regime.

Source: SHARE Wave 4, 5, 6 release 6.1.1.

lived with others. In northern European countries, as well as in Germany, Austria and Slovenia, older persons living alone were more likely to smoke. In addition, in all countries except for Israel, older persons living alone were significantly less physically active. Econometric analysis further confirmed that the link between living alone and smoking and physical inactivity varied significantly across different welfare regimes. In contrast, whereas age is correlated with health behaviours, we found no evidence that it also modifies the link between living alone and health behaviours. In other words, regardless of their living arrangement, older adults exhibit similar differences in health behaviour by age.

Overall, our analysis supports two main conclusions. First, living alone is an important indicator of higher risk of adverse health behaviour for older adults. Therefore, developing targeted public policies for this population that focus on promoting a healthy lifestyle is appropriate. Second, living arrangements and related health behaviours vary substantially across countries, implying that policy priorities and solutions from one country may be informative but not necessarily readily applicable or effective in other countries. Although scope exists for interventions across Europe, a one-size-fits-all policy approach is likely suboptimal. Future research should explore the issue of pathways into living alone because this information can complement the insights of the present analysis and provide a foundation for a set of country-specific policy recommendations.

References

- Abuladze, L., Kunder, N., Lang, K. & Vaask, S. (2017). Associations between self-rated health and health behaviour among older adults in Estonia: a cross-sectional analysis. *BMJ Open* 2017; 7:e013257. doi: 10.1136/bmjopen-2016-013257.
- Kharicha, K., Harari, D., Swift, C., Gillmann, G. & Stuck, A. E. (2007). Health risk appraisal in older people 1: are older people living alone an 'at-risk' group? *British Journal of General Practice* 2007; 57 (537): 271–276.
- Reher, D. & Requena, M. (2018). Living Alone in Later Life: A Global Perspective. *Population and Development Review*; 44 (3): 427–454. doi:10.1111/padr.12149.
- Segovia, J., Bartlett R. F. & Edwards A. C. (1989). The association between self-assessed health status and individual health practices. *Canadian Journal of Public Health*; 80 (1): 32–37.
- Van De Kaa, D. J. (1987). Europe's second demographic transition. *Population Bulletin*; 42 (1): 1–59.